



- 39 -

of: albumin, immunoglobulin A, immunoglobulin G and mixtures of one or more immunoglobulins.

10. The method according to claim 1, wherein  
said biological material is mammalian tissue or a component of  
5 mammalian tissue.

11. The method according to claim 1, wherein said biological material is a recombinantly-produced biological material.

12. The method according to claim 1, wherein  
10 said biological material is a transgenic biological material.

13. The method according to claim 1, wherein said biological material is a food or a botanical product.

14. The method according to claim 1, wherein said ionizing radiation is gamma radiation.

15                    15.            The method according to claim 1, wherein  
said biological material is a carbohydrate or polysaccharide.

16. The method according to claim 1, wherein said biological material is selected from the group consisting of chitin, chitosan, NOCC-chitosan and derivatives thereof.

20                    17.            The method according to claim 1, wherein  
said biological material is a product of cellular metabolism.

18. The method according to claim 1, wherein said effective rate is not more than about 3.0 kGy/hour.

19 . The method according to claim 1, wherein  
25 said effective rate is more than about 3.0 kGy/hour.

20. The method according to claim 1, wherein said effective rate is not more than about 6.0 kGy/hour.

25 (i) adding to a biological material at least one stabilizer in an amount effective to protect said biological material from said ionizing radiation; and

- 41 -

(ii) irradiating said biological material with a suitable ionizing radiation at an effective rate for a time effective to sterilize said biological material.

5 31. The method according to claim 30, wherein said at least one stabilizer is an antioxidant.

32. The method according to claim 30, wherein said at least one stabilizer is a free radical scavenger.

10 33. The method according to claim 30, wherein said at least one stabilizer is selected from the group consisting of: ascorbic acid or a salt or ester thereof, glutathione, tocopherol, 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid, rutin and other flavanoids.

15 34. A method for sterilizing a biological material that is sensitive to ionizing radiation, said method comprising:

(i) reducing the residual moisture content of a biological material to a level effective to protect said biological material from said ionizing radiation;

20 (ii) adding to said biological material at least one stabilizer in an amount effective to protect said biological material from said ionizing radiation; and

(iii) irradiating said biological material with a suitable ionizing radiation at an effective rate for a time effective to sterilize said biological material.

25 35. A method for sterilizing a biological material that is sensitive to ionizing radiation, said method comprising:

30 (i) adding to a biological material at least one stabilizer in an amount effective to protect said biological material from said ionizing radiation;

- 42 -

(ii) reducing the residual moisture content of said biological material to a level effective to protect said biological material from said ionizing radiation; and

(iii) irradiating said biological material with a  
5 suitable ionizing radiation at an effective rate for a time  
effective to sterilize said biological material.